## \*108541\*

Page 1

Friday, October	18, 2013 4:14	4:36 PM			1176	1.141					. *	1 age 1
Revision ID:	D2976 Bo 105 Skidtub	be I Beam			Accept	*N900	<u> </u>	100	)* s	Setup Start	ı	S1*
Start Date: Required Date: Reference:	10/18/2013 10/31/2013	Start Qu Req'd Q	•	*7		Cust Item Customer					N	S2*
Approvals:	Process Plan	n: M	UF	Date: 13-	O-18 Tooling:		Date:		R	tun Start	*N	R1*
	QC:				SPC (Y/N):		Date:			Stop	*N	R2*
Sequence ID/ Work Center ID		Operation Descript			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revi	ision Nbr	,					<u></u>				
D2976	Rev	A1 -				-						
*100 *100* Skidtubes Skidtubes	•	Skidtubes	Memo Cut D2963- holesOpen i	084 extrusion to le noles to finish size	0.00 0.00 ngth: (82.00")Use Jig DT8546 t per dwg D2976Deburr	o drill pilot	13-16	<sub>1)</sub> - 2	10	Def		e de la companya de l
110		Chemical (	Conversion C	oat per QSI005°4.1	0.00		•			,	•	
*110* HandFinish Hand Finishing			Memo	-	0.00	Dol	13-10	23			PT	D
<sup>120</sup> *120*		QC5- Inspe	ect part comp	leteness to step on	W/O 0.00				$\sim$			
QC Quality Control			Memo		0.00			6	A	) 13	3-1	0-23

NCR:	Yes	- /	No
WCD.	153	,	INU

## **WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: Aut Date: 13/11/15

											QA Closed:	Date:	DONNE
Work Ord	٥	i	1500	//		DISPOSITION			·	AGAINST DE	PARTMENT	PROCESS	
	No.	D A	0X54 2974 3180		· · · · · · · · · · · · · · · · · · ·	Rework Scrap Use-as-is Work Order Update		t Therm	Skid-tube X Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root					Descri	ption of work order update	1	nitial	Act	tion	Sign &		
Cause		Date	Step	Qty		or Non-conformance		ief Eng	Desci	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		13-10-23	110	1	1	olodining employed of Loge victor rotes on extusion of picking .	Q)	DAS 16 9-89 10/73	PA; Patrain	Peplace . ~ employee	13-10-23 13-10-23 13-10-23	13-10-23 DGL 13-10-23	DAS 16 8-89 [3/10/2] QSZO42
		** - **					AUL	T CATE	GORY				
Land		Bending Centre No Cracks Crushed/ Cuffs Heat Trea Inspectio Ripples in	/Crimped at in Strip in in Bend	Tube Extrusio		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing Finish		Instruct Mainte Mislabe Misread Offset Out of 0	ion Incomplete ions Incomplete/I enance eled	Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
1	-	1 -	i-+ i- Tul		<b>⊢</b>	-  ''''3''	$\vdash$	1	Dimensions				

## \*108541\*

Page 2

Friday, October	18, 2013 4:	14:36 PM			,, , <del>, ,</del> ,		J
Item/ID: Revision ID: Item Name:	D2976 Bo 105 Skidtu	ube I Beam		Accept	*N900040100	* Setup Start	*NS1* *NS2*
Start Date: Required Date: Reference:	10/18/2013	Start Qty: 2.00 Req'd Qty: 2.00	*2* *2*		Cust Item ID: Customer:		
Approvals:	Process Pla	an:	Date:		Dațe: - Date:	Run Start Stop	*NR1* *NR2*
Sequence ID/ Work Center II 130 *130*	<b>D</b>	Operation Description Identify as per dwg & S	tock Location.46	Set Up/ Run Hours 0.00	Tool ID Tool # Plan Code		Reject Insp. Number Stamp
Packaging Packaging		Memo ,		0.00		13-	-10-23
140 *140*		QC21- Final Inspection	- Work Order Release	0.00	× 11	F/1/12 (0-52)	· · · · · · · · · · · · · · · · · · ·
QC Quality Control		Memo		0.00	o g	1 / fl 13-10-24	13/10°2

												DQA:	Da	ite:	
NCR:	Yes	/ No				WORK ORDER NON-		NFORN	ANCE / UP	DATE					
											Q	(A Closed:	Da	ite:	
Work Orde	or.					DISPOSITION				AGAINST DE	EP/	ARTMENT	/PROCESS		
VVOIK OIG	٠٠			<del></del>		Rework	7		Skid-tube	Crosstube	٦		Water Jet		Engineering
Part N	No.					Scrap	1		Machining	Small Fab	1	Pro	d. Eng. Coor.	$\vdash$	Quality
	-					Use-as-is	1 1	Thermoforming Finishing			Rec/Store/Packaging			-	Other
NCR I	No. ِ					Work Order Update	]		Large Fab	Composite			Supplier		
Root	-		<u> </u>	П	Descri	ption of work order update		Initial	Ac	tion	Τ	Sign &			
Cause	Ì	Date	Step	Qty		or Non-conformance	1	ief Eng	Desc	ription	١	Date	Verificatio	ก	QC Inspector
Doc/Data	П										T				
Equip/Tooling															
Operator			ļ								1				
Material															
Setup -			1												
Other							1								
Process											1				
Supplier			1				ļ								,
Training			1												
Unapproved											Ĺ				
						F	AUL	T CATE	GORY				<u>.</u>		
Landi	ng (	Gear				General		_			_			_	•
]		Bending				Bend	$oxed{L}$	Grain			┥.	valized		L	Pressure/Forced
ļ		Centre N	ot Conce	ntric to O	/s	BOM/Route		Hardwa	re		<u>ا</u> د	ver/Under	tolerance	_	Temperature/Cure
	-	Cracks				Broken/Damaged	$\perp$	4 '	on Incomplete	_	→	art Incorrec		<u>_</u>	Weld
		Crushed,	Crimped		]	Burrs		Instruct	ions Incomplete/	Unclear	┥.	art Lost/Mi	ssing		Wrong Stock Pulled
	$\perp$	Cuffs				Contamination		Mainte		<u> </u>	-	art Moved			
	$ldsymbol{le}}}}}}$	Heat Tre	at			Countersink		Mislabe			-	ositioned V	-	_	7
	L	Inspectio	n Strip in	1 Tube		Cut Too Short		Misread	j	<u></u>	P	ower Loss/	Surge		Other
	1	Ripples in	n Bend			Drill Holes	1	Offset							

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence Wave/Twist in Tube

Ripples in Bend

Torque Waves in Extrusion

Drill Holes

Drawing

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Friday October 18, 2013 4:14:36 PM

Work Order ID:

108541

Parent Item:

D2976

Parent Item Name:

Bo 105 Skidtube I Beam

Start Date: 10/18/2013

**Required Date:** 10/31/2013

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP C02.10.30Re-formatKJ

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status	-
D2963-084		Manufactured	No			110	Each	70.0000	1	2				
Extrucion														

 Location
 Loc Qty
 Loc Code

 HALL
 .70
 .70

 70
 .70
 .70

2

13-10-21 Wak

		DQA:	Date:	
Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			

NCR:	Yes / No	4	WORK ORDER NON-CONFOR
NCR:	Yes / No		WORK ORDER NON-CONFOR
	165 / 110		

									QA Closed:	Date	e:
Work Order	·				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No	)				Rework Scrap Use-as-is Work Order Update	Ther	Skid-tube  Machining  moforming  Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	iption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	,	or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved			. •								
Onapproved	_1	<u> </u>	<u> </u>	<u> </u>		AULT CAT	 EGORY		<u> </u>	l	1
Landing	g Gear				General						
	Bending Centre No Cracks Crushed/ Cuffs Heat Trea	Crimped	ntric to	o/s	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink	Instruc	tion Incomplete ctions Incomplete/ enance	'Unclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V	ct	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
	Inspection Strip in Tube				Cut Too Short	Misrea	ad		Power Loss/	Surge	Other
,	Ripples in	Bend			Drill Holes	Offset					
	Torque W			n _	Drawing	<b></b>	Calibration				
` .	Turning S	-			Finish	Out of	Sequence				
	Wave/Twist in Tube				Folio	Outsid	le Dimensions				

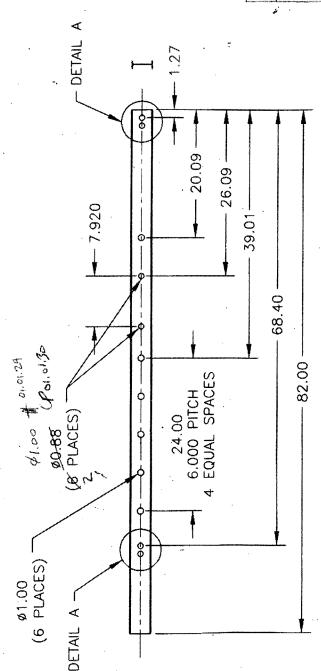
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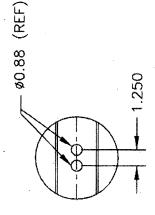




DESIG	N R	DRAWN BY	DART	AEROSPACE BELLEVUE, W.		SA, I	NC.
CHECK	(ED	APPROVED	DRAWING NO. D2976		,	SHEE	REV. A
DATE	·		TITLE				SCALE
00.0	3.14		WEB			-,	1:14
Α		00.03.14	NEW ISSU	ìE .	•		•
Al		01-01-29	OPEN GROUN	D HAMDLING HOLES	TD	Ø1.00	

RELEASED





MAKE FROM D2963-084 EXTRUSION FINISH: ACID ETCH, ALODINE PER DART QSI 005, 4.1 \* TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED ARE PER DART

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	•	•	DQA:	Date:	
NCR:	Yes / No	WORK ORDER NON-CONFORMANCE / UPDATE			

<del>-</del> :				····					QA Closed:	Date	:
Work Order	•				DISPOSITION		•	AGAINST DI	PARTMENT	/PROCESS	
Part No NCR No			•		Rework Scrap Use-as-is Work Order Update	- 1	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	-1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descr	iption of work order update	Initial	. Ac	ction	Sign &	~~	
Cause	Date	Step	Qty		or Non-conformance	Chief Eng	Desc	cription	* Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training							7				
Unapproved		<u> </u>		٠ ,			-		<u> </u>		
				•		<b>AULT CATE</b>	GORY				
Landing	Bending				General Bend	Grain	,		Ovalized		Pressure/Forced
-	Centre Not Concentric to O/S Cracks				BOM/Route Broken/Damaged Burrs	Inspec	are incomplete tions incomplete		Over/Under Part Incorred Part Lost/Mi	ct	Temperature/Cure Weld Wrong Stock Pulled
-	Cuffs				Contamination Countersink	·	enance	Volleicai	Part Moved Positioned V		
	Inspection Strip in Tube Cut Too Short				Cut Too Short	Misrea	d 🦙 ∽	•	Power Loss/	Surge	Other
. [	Ripples in Bend Drill Holes				Drill Holes	Offset	:4,149				
Torque Waves in Extrusion Drawing					Drawing	Out of Calibration					
Turning Sequence Finish					Out of	Sequence					
Γ	Wave/Tw	ist in Tul	oe		Folio	Outsid	e Dimensions	-	- 17° W		